Frank, F. J. "Ground Water in the Eugene-Springfield Area, Southern Willamette Valley, Oregon." 1973. Geological Survey Water-Supply Paper 2018. United States Department of the Interior, Washington, D.C. (Reviewed by Elizabeth Parsons)

This report provides scientific data about the goundwater in the Eugene-Springfield area in the early 1970s. The report has four goals: to describe the “geohydrologic” system, to identify the sources and movement of groundwater, to determine the chemical content of the water, and to determine how much water is used and how much more is available.

It's interesting to learn what the conditions were like thirty years ago, even though only part of the report (the chemical content of the water) pertains to human health. There is a brief section on the uses of groundwater, and they provide a small table of the quantities and uses in 1968. About 61% is used for irrigation, 2% for industry, 35% for public and municipal supply (including some industrial uses), and another 2% for rural uses (domestic and livestock). The groundwater they studied contained very small amounts of arsenic and manganese, making it unsuitable for drinking. The water was low-sodium and low-salinity and judged adequate for irrigation. They include a large table with different chemicals listed with their sources and possible consequences. More than 45 milligrams of nitrate per liter of water, for example, “may suggest pollution . . . [it] may cause cyanosis, the so-called ‘blue baby' disease in infants” and “prolonged consumption of water containing more than 0.05 mg/l of arsenic may lead to chronic poisoning” (p. 41). They report that in the future, contamination of the groundwater may become a serious problem, especially where the water is near the surface. They conclude that there is sufficient groundwater in most parts of the Eugene-Springfield area and that the water is suitable for most uses (though not for drinking).

Critique

Although this report is technical and intended for state agencies and not for the layperson, it provides interesting and important information about the conditions of groundwater in the 1970s. It's a bit long but the pertinent information is easy to locate, and the tables include exact scientific data. I wouldn't recommend this source to someone looking for current information, but someone interested in the past water quality might enjoy it. It was published by a highly reliable source, the U.S. Department of the Interior, and confirms what I have heard from other sources (that local groundwater has high levels of arsenic and other chemicals). It also provides a map of the area in question.

This information might be especially pertinent for someone with a well on his or her property, who's wondering whether the water can be used and for what purposes.

return to info sources page

return to home page